AMENDMENTS TO THE CLAIMS:

1. (currently amended) A method for characterization of a candidate agent according to its ~~of characterizing a candidate agent for activity in an asthma/atopy context~~ effect on allergic/atopic conditions, the method comprising:

contacting said candidate agent with ~~deriving a biological dataset profile for a test agent, said comprising output from 2 or more parameters obtained in~~ an asthma/atopy context system selected from

(a) primary human umbilical vein endothelial cells (HUVEC) in the presence of IL-4 and histamine with at least three different cellular parameters selected from CD55, VCAM-1, P-selectin, Eotaxin-3, MCP-1, VEGF receptor 2 and uPAR (CD87);

(b) HUVEC and T cells in the presence of IL-2 and superantigen with at least three different parameters selected from IFN-γ, TNF-alpha, IL-2, IL-4, IL-5, IL-8, IL10, IL-13, LT-alpha, CCR4, CCR5, CXCR3, IL-4Ralpha, CD11c, CD38, CD40, CD69, E-Selectin, Eotaxin-3, CD106, CD134, CD150, CD137, CD69, CD200, B7-H1, B7-H2, MIG and CD87;

(c) Human neonatal fibroblasts (HDFn) in the presence of TNF, IL-1, IFN and TGFβ with at least three different parameters selected from ICAM, VCAM, CD40, CD90, IP-10, MCP-1, Collagen I, Mig, m-CSF, TIMP-2, PAI-I, and IL-8

(d) HDFn in the presence of TGFβ with at least three different parameters selected from CD90, Collagen I, Collagen III, HLA-DR, PAI-I, and VCAM

(e) human bronchial epithelial cells and HDFn in the presence of IL-4 and TNFα with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18

(f) primary human umbilical artery smooth muscle cells in the presence of IL-4 and histamine with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(g) primary human umbilical artery smooth muscle cells in the presence of IL-1, TNF-α and IFNγ with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(h) human bronchial epithelial cells in the presence of IL-1β, TNFα and IFN-γ with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18;

and (i) human bronchial epithelial cells in the presence of IL-4, IL-13 and TNFα with at least three different parameters selected from Eotaxin-3, ICAM-1, IL-1a, IL-8, TGF-β, PAI-1, MMP-9, uPA and Keratin 8/18;

measuring changes in parameters as a result of introduction of said candidate agent in said at least three different parameters;

deriving a biological dataset from said changes in parameters, wherein said ~~profile~~ biological dataset comprises control data from said asthma/atopy context system lacking said ~~biologically active~~ candidate agent;

comparing said ~~profile~~ biological dataset to a reference ~~profile~~ biological dataset that includes predetermined agents that target specific asthma/atopy pathways to determine the presence of variation, wherein the presence or absence of variation from said reference biological datasets provides a characterization of said candidate agent's effect on allergic/atopic conditions ~~wherein said test agent profile is different than the control if at least one parameter value of the profile exceeds a predefined level of significance~~.

2. (currently amended) The method according to Claim 1, wherein said ~~test~~ candidate agent is a ~~genetic agent~~ polynucleotide or analog thereof.

3. (currently amended) The method according to Claim 1, wherein said candidate agent is a ~~chemical or biological agent~~ drug or polypeptide.

4. (canceled)

5. (currently amended) ~~The method according to Claim 4,~~ A method for characterization of a candidate agent according to its effect on allergic/atopic conditions, the method comprising:

contacting said candidate agent with ~~wherein said system comprises~~ a plurality of asthma/atopy context systems ~~samples of a single cell type or types in a common biologically relevant context; comprising at least one control in the absence of the test agent~~ selected from

(a) primary human umbilical vein endothelial cells (HUVEC) in the presence of IL-4 and histamine with at least three different cellular parameters selected from CD55, VCAM-1, P-selectin, Eotaxin-3, MCP-1, VEGF receptor 2 and uPAR (CD87);

(b) HUVEC and T cells in the presence of IL-2 and superantigen with at least three different parameters selected from IFN-γ, TNF-alpha, IL-2, IL-4, IL-5, IL-8, IL10, IL-

13, LT-alpha, CCR4, CCR5, CXCR3, IL-4Ralpha, CD11c, CD38, CD40, CD69, E-Selectin, Eotaxin-3, CD106, CD134, CD150, CD137, CD69, CD200, B7-H1, B7-H2, MIG and CD87;

(c) Human neonatal fibroblasts (HDFn) in the presence of TNF, IL-1, IFN and TGFβ with at least three different parameters selected from ICAM, VCAM, CD40, CD90, IP-10, MCP-1, Collagen I, Mig, m-CSF, TIMP-2, PAI-I, and IL-8

(d) HDFn in the presence of TGFβ with at least three different parameters selected from CD90, Collagen I, Collagen III, HLA-DR, PAI-I, and VCAM

(e) human bronchial epithelial cells and HDFn in the presence of IL-4 and TNFα with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18

(f) primary human umbilical artery smooth muscle cells in the presence of IL-4 and histamine with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(g) primary human umbilical artery smooth muscle cells in the presence of IL-1, TNF-α and IFNγ with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(h) human bronchial epithelial cells in the presence of IL-1β, TNFα and IFN-γ with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18;

and (i) human bronchial epithelial cells in the presence of IL-4, IL-13 and TNFα with at least three different parameters selected from Eotaxin-3, ICAM-1, IL-1a, IL-8, TGF-β, PAI-1, MMP-9, uPA and Keratin 8/18;

measuring changes in parameters as a result of introduction of said candidate agent in said at least three different parameters;

deriving a biological dataset from said changes in parameters, wherein said biological dataset comprises control data from asthma/atopy context systems lacking said candidate agent;

comparing said biological dataset to a reference biological dataset that includes predetermined agents that target specific asthma/atopy pathways to determine the presence of variation, wherein the presence or absence of variation from said reference biological datasets provides a characterization of said candidate agent's effect on allergic/atopic conditions.

6. (currently amended) ~~The method according to Claim 5,~~ A method for characterization of a candidate agent according to its effect on allergic/atopic conditions, the method comprising:

contacting said candidate agent with a plurality of asthma/atopy context systems selected from

(a) primary human umbilical vein endothelial cells (HUVEC) in the presence of IL-4 and histamine with at least three different cellular parameters selected from CD55, VCAM-1, P-selectin, Eotaxin-3, MCP-1, VEGF receptor 2 and uPAR (CD87);

(b) HUVEC and T cells in the presence of IL-2 and superantigen with at least three different parameters selected from IFN-γ, TNF-alpha, IL-2, IL-4, IL-5, IL-8, IL10, IL-13, LT-alpha, CCR4, CCR5, CXCR3, IL-4Ralpha, CD11c, CD38, CD40, CD69, E-Selectin, Eotaxin-3, CD106, CD134, CD150, CD137, CD69, CD200, B7-H1, B7-H2, MIG and CD87;

(c) Human neonatal fibroblasts (HDFn) in the presence of TNF, IL-1, IFN and TGFβ with at least three different parameters selected from ICAM, VCAM, CD40, CD90, IP-10, MCP-1, Collagen I, Mig, m-CSF, TIMP-2, PAI-I, and IL-8

(d) HDFn in the presence of TGFβ with at least three different parameters selected from CD90, Collagen I, Collagen III, HLA-DR, PAI-I, and VCAM

(e) human bronchial epithelial cells and HDFn in the presence of IL-4 and TNFα with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18

(f) primary human umbilical artery smooth muscle cells in the presence of IL-4 and histamine with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(g) primary human umbilical artery smooth muscle cells in the presence of IL-1, TNF-α and IFNγ with at least three different parameters selected from VCAM, CD40, HLA-DR, ICAM, IL-8, MCP-1, M-CSF, MIG, Thrombomodulin, and uPAR;

(h) human bronchial epithelial cells in the presence of IL-1β, TNFα and IFN-γ with at least three different parameters selected from ICAM-1, IL-1a, IP-10, TGF-β, MIG, HLA-DR, PAI-1, I-TAC, MMP-1, MMP-9, CD87 and Keratin 8/18;

and (i) human bronchial epithelial cells in the presence of IL-4, IL-13 and TNFα with at least three different parameters selected from Eotaxin-3, ICAM-1, IL-1a, IL-8, TGF-β, PAI-1, MMP-9, uPA and Keratin 8/18;

measuring changes in parameters as a result of introduction of said candidate agent in said at least three different parameters;

deriving a biological dataset from said changes in parameters, wherein said biological dataset comprises control data from said asthma/atopy context system lacking said candidate agent;

comparing said biological dataset to a reference biological dataset that includes predetermined agents that target specific asthma or atopy pathways to determine the presence of variation, wherein the presence or absence of variation from said reference biological datasets provides a characterization of said candidate agent's effect on allergic/atopic conditions wherein ~~a~~ said plurality of systems are concatenated for simultaneous analysis.

7. (canceled)